

AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A method of selectively interpreting or translating program code in a computing environment having a target processor and a memory coupled to the target processor, the program code comprising instructions from the instruction set of a subject processor, the method comprising:

decoding said program code;

applying an interpreting algorithm to identify whether said program code is interpretable by a simple interpreter, said simple interpreter capable of interpreting only a subset of instructions from the instruction set of the subject processor;

if said program code contains only instructions in the subset such that the program code is interpretable by the simple interpreter, choosing to interpreting the program code using the simple interpreter; and

choosing to translate said program code using a translator when said program code is not interpreted.

2. (Original) The method of claim 1, wherein said program code comprises a basic block of program code.

3. (Original) The method of claim 1, wherein the step of applying a interpreting algorithm comprises determining whether instructions in said program code are included in a subset of instructions capable of being interpreted by the interpreter.

4. (Original) The method of claim 3, further comprising selecting the subset of instructions as a portion of an entire instruction set for the program code.

5. (Original) The method of claim 4, wherein the subset of instructions selecting step comprises selecting instructions from the entire instruction set which are executed most frequently across at least one program application.

6. (Original) The method of claim 4, wherein the selected subset of instructions is capable of interpreting a majority of the basic blocks of a specific target program application.
7. (Original) The method of claim 4, wherein the subset of instructions is selected to interpret a specific target program application.
8. (Original) The method of claim 1, wherein the step of applying an interpreting algorithm to identify whether the program code is interpretable further comprises determining whether an execution count of the program code is below a translation threshold,
wherein the program code is translated by the translator if the execution count of the program code is greater than or equal to the translation threshold.
9. (Original) The method of claim 2, wherein the step of applying an interpreting algorithm to identify whether the basic block of program code is interpretable further comprises determining whether an execution count of the basic block of program code is below a translation threshold,
wherein the basic block of program code is translated by the translator if the execution count of the basic block of program code is greater than or equal to the translation threshold.
10. (Currently amended) A computer-readable storage medium having software resident thereon in the form of computer-readable code executable by a target computer to perform the following steps during selective interpretation or translation of program code comprising instructions from an instruction set of a subject processor:
decoding said program code;
applying an interpreting algorithm to identify whether said program code is interpretable by a simple interpreter, said simple interpreter capable of interpreting only a subset of instructions from the instruction set of the subject processor;
if said program code contains only instructions from the subset such that the program code is interpretable by the simple interpreter, choosing to interpreting the program code using the simple interpreter; and
choosing to translate said program code using a translator when said program code is not interpreted.

11. (Original) The computer-readable storage medium of claim 10, wherein said program code comprises a basic block of program code.

12. (Original) The computer-readable storage medium of claim 10, wherein the step of applying a interpreting algorithm comprises determining whether instructions in said program code are included in a subset of instructions capable of being interpreted by the interpreter.

13. (Original) The computer-readable storage medium of claim 12, said computer-readable code further executable for selecting the subset of instructions as a portion of an entire instruction set for the program code.

14. (Original) The computer-readable storage medium of claim 13, wherein the subset of instructions selecting step comprises selecting instructions from the entire instruction set which are executed most frequently across at least one program application.

15. (Original) The computer-readable storage medium of claim 13, wherein the selected subset of instructions is capable of interpreting a majority of the basic blocks of a specific target program application.

16. (Original) The computer-readable storage medium of claim 13, wherein the subset of instructions is selected to interpret a specific target program application.

17. (Original) The computer-readable storage medium of claim 10, wherein the step of applying an interpreting algorithm to identify whether the program code is interpretable further comprises determining whether an execution count of the program code is below a translation threshold,

wherein the program code is translated by the translator if the execution count of the program code is greater than or equal to the translation threshold.

18. (Original) The computer-readable storage medium of claim 11, wherein the step of applying an interpreting algorithm to identify whether the basic block of program code is interpretable further comprises determining whether an execution count of the basic block of program code is below a translation threshold,

wherein the basic block of program code is translated by the translator if the execution count of the basic block of program code is greater than or equal to the translation threshold.

19. (Currently amended) A translator/interpreter apparatus for use in a computing environment having a target processor and a memory coupled to the target processor for either translating or interpreting program code from an instruction set of a subject processor, said translator/interpreter apparatus comprising:

a decoding mechanism configured ~~for~~to ~~decoding~~ said program code;

an interpreter capable of interpreting only a subset of instructions from the instruction set of the subject processor, and comprising an interpreter mechanism,

wherein the interpreter mechanism is configured for ~~to~~ applying an interpreting algorithm to identify whether said decoded program code contains only instructions from the subset of instructions which the interpreter is capable of interpreting, ~~is interpretable by an interpreter~~ and, if said program code contains only such instructions ~~is interpretable~~, choosing to interpreting the program code using the interpreter; and

a translator mechanism configured ~~for~~to ~~translating~~ said decoded program code using a translator when said program code is not interpreted.

20. (Original) The translator/interpreter apparatus of claim 19, wherein said program code comprises a basic block of program code.

21. (Original) The translator/interpreter apparatus of claim 19, wherein the interpreter mechanism is further configured to determine whether instructions in said program code are included in a subset of instructions capable of being interpreted by the interpreter.

22. (Original) The translator/interpreter apparatus of claim 21, further comprising an instruction selecting mechanism for selecting the subset of instructions as a portion of an entire instruction set for the program code.

23. (Original) The translator/interpreter apparatus of claim 22, wherein the instruction selecting mechanism is further configured for selecting instructions from the entire instruction set which are executed most frequently across at least one program application.

24. (Original) The translator/interpreter apparatus of claim 22, wherein the selected subset of instructions is capable of interpreting a majority of the basic blocks of a specific target program application.

25. (Original) The translator/interpreter apparatus of claim 22, wherein the subset of instructions is selected to interpret a specific target program application.

26. (Original) The translator/interpreter apparatus of claim 19, wherein the interpreter mechanism is further configured to determine whether an execution count of the program code is below a translation threshold,

wherein the program code is translated by the translator mechanism if the execution count of the program code is greater than or equal to the translation threshold.

27. (Original) The translator/interpreter apparatus of claim 20, wherein the interpreter mechanism is further configured to determine whether an execution count of the basic block of program code is below a translation threshold,

wherein the basic block of program code is translated by the translator mechanism if the execution count of the basic block of program code is greater than or equal to the translation threshold.